

ENVIRONMENTAL ASSESSMENT

for

Marble Drive Fuel Hazard Reduction

EA# OR-110-03-19

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
GRANTS PASS RESOURCE AREA

June 2003

Dear Reader:

We appreciate your interest in the BLM's public land management activities. We also appreciate your taking the time to review this environmental assessment (EA). If you would like to provide us with written comments regarding this project or EA, please send them to Abbie Jossie, Field Manager, Grants Pass Resource Area at 3040 Biddle Road, Medford, OR 97504 or email them to or110mb@or.blm.gov.

If you would like to comment confidentially, please be aware that comments, including names and addresses of respondents, will be available for public review or may be held in a file available for public inspection and review unless you request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this clearly at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or officials of organizations or businesses will be made available for public inspection in their entirety.

I look forward to your continued cooperation in the management of our public lands.

Abbie Jossie
Field Manager
Grants Pass Resource Area

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

EA COVER SHEET

RESOURCE AREA: Grants Pass

FY & EA # OR-110-03-19

ACTION/TITLE: Marble Drive Fuel Hazard Reduction

LOCATION: Marble Drive / Azalea Road Area: T36S, R6W, Sec. 9, SE ¼, Wm., Josephine Co.

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Chapter 1. Purpose of and Need for Action

A. Introduction

This environmental assessment (EA) will assist in the decision-making process by assessing the environmental and human effects resulting from implementing the proposed project or alternatives. The EA will also assist in determining if an environmental impact statement (EIS) needs to be prepared or if a finding of no significant impact (FONSI) is appropriate.

This EA tiers to the following documents:

1. *Final EIS and Record of Decision for the Medford District Resource Management Plan (RMP)* (June 1995);
2. *Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl* (February 1994);
3. *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* and its attachment A entitled *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (April 13, 1994).
4. *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (January 2001).

B. Purpose of and Need for Action

The purpose of the proposed project is to reduce the potential for severe wildfire by treating vegetation in order to alter fire behavior. The project area is within a larger area that was burned by a high intensity wildfire in the mid 1970s. Approximately 35 years of flammable vegetation accumulation has resulted in a significant wildfire hazard. The absence of frequent landscape wildfire has led to high tree and brush density levels and dense patches of merchantable and non-merchantable size conifers.

The urban-wildland interface area around Merlin and Grants Pass is identified in the National Fire Plan as a community at risk from wildland fire. Furthermore, the project area is completely bordered by private land with private residences. In most cases, the dense vegetation found throughout the project area occurs right up to the property boundaries of private residences, prompting several requests from homeowners for the BLM to address this fuel hazard. Three special use permits to mitigate the fuel hazard on BLM land have been issued to private landowners adjacent to the project area.

C. Project Location

The 80 acre project area is in T36S, R6W, Sec. 9, SE ¼ (see Map 1, Vicinity Map). Existing roads would be used to access the project area. Primary access is through a Josephine County right-of-way located off North Marble Drive. Written permission to cross private land would be pursued as needed.

D. Issues and Concerns

A variety of issues and concerns were raised during scoping and interdisciplinary team discussion:

- Due to long term absence of fire, the current fire hazard is very high to extreme.
- Disturbance to nesting birds and other wildlife is possible if project activities occur during the spring reproductive period.
- The spread of noxious weeds and other invasive, non-native species may be facilitated by project activities.
- Fuel and slash treatment options may be limited due to Medford/Grants Pass Air Quality Maintenance Area restrictions.
- Oak woodlands, meadows, and associated habitats have declined in vigor and extent due to exclusion of the natural fire cycle.
- Survey and Manage species may be disturbed due to project implementation.
- Given the project area's proximity to a rural residential area, consider safety and visual impacts of the project.
- Soil compaction could occur as a result of project activities

E. Land Use Allocations and Objectives

The project area is located on matrix and riparian reserve land allocations. Broad management objectives for these land allocations are outlined in the NFP and the Medford District RMP.

F. Definitions of Some Commonly Used Terms

Hazard is defined as the existence of a fuel complex that constitutes a threat of wild land fire ignition, unacceptable fire behavior and severity, or suppression difficulty. Fuels include dead or down wood and live vegetation. Dead, down fuels are woody materials that can support fire ignition and spread and is usually expressed in tons/acre. Live fuels grow vertically and their densities are usually expressed as crown base height and crown bulk density. Crown base height is the distance between surface fuels and tree crowns. The greater the crown base height, the longer the flame length needed to ignite the crowns. Crown bulk density is the amount of crown fuels within a given area and is usually expressed as pounds of foliage per cubic foot. The greater the crown bulk density, the easier it is for crown fires to spread.

Chapter 2. Proposed Action and Alternatives

A. Alternative 1: No Action

The no action alternative is defined as not implementing the proposed action. The no action alternative also serves as a baseline for evaluating the environmental effects of the action alternative. Inclusion of this alternative is done without regard to whether or not it is consistent with the Medford District RMP.

The no action alternative is not static: implied is a continuation of current environmental conditions and trends including vegetative succession, habitat changes, erosion, and fire hazard.

B. Alternative 2: Proposed Action

1. Objectives

a. Fuel Hazard Reduction

Alter fuel structure and amounts in order to moderate potential wildfire behavior and reduce fire severity. National Fire Danger Rating System (NFDRS) fuel model changes characterize this objective:

- In brush fields where vegetation is continuous and at least 6' tall (fuel model 4), reduce brush from 13 tons/acre to approximately 4 tons/acre and break up fuel continuity (fuel model 5). Given a moderate 5 mph summer wind, flame length would decrease from 19' to 4'.
- In timbered stands, reduce stand density and litter accumulation (fuel model 9 reduced to a fuel model 8). With the same weather conditions as above, ground fire flame length would decrease from 2.6' to 1'.

Over the next five years, maintain reduced fire hazard conditions (see desired fuel loadings and fuel models, above).

b. Wildlife Habitat Maintenance and Enhancement

Maintain or enhance woodlands, oak woodlands, oak savannas and meadows by reducing the fuel hazard, stand density and encroaching vegetation (current stand densities could be estimated at nearly three times that which would occur under a more natural pattern of frequent disturbance). Enhancing the vigor of hardwood stands improves acorn crops and promotes sprouting, which encourages development of a multi-age stand.

Maintain chaparral habitat.

Retain large diameter hardwoods, vigorous pine and large limbed, open growth Douglas-fir.

Reduce density of small diameter Douglas-fir and shrubs.

Encourage natural grass species diversity and extent.

Minimize noxious weed spread and introduction.

c. Botanical Habitat Restoration and Enhancement

Reduce encroaching vegetation on the meadow and restore meadow plant species vigor.

2. Treatments

a. Overview

Fuel hazard reduction treatments would involve thinning and/or underburning vegetation on 80 acres of BLM administered land. Project implementation would take approximately three weeks and may be spread out for several months during the fall, winter or spring. Vegetation would be thinned using mechanical and manual techniques such as selective slashing and slashbusting. Slash created by the project would be hand piled and burned, underburned or left on site, creating a mosaic pattern of treated and untreated areas. Some material may be removed from the site in the form of poles or firewood. Trees cut would be less than 12" diameter at breast height (dbh). Light underburning within the next 5 years would be beneficial in maintaining reduced fire hazard. For detailed descriptions of treatment tools such as slashbusting, underburning, etc., see Appendix C, Tools.

Down wood resulting from project implementation that is not burned or masticated by the slashbuster would be available to surrounding private landowners as poles or fuel wood. Fire wood collectors must comply with state fire regulations and may not drive off road in the project area.

b. Perimeter Treatment Area

Selective slashing, hand piling, and burning would be used to treat a 150' strip on the perimeter of the project area and that borders private lands. The slashbuster would be used on the interior of the project area and not within that 150' strip. This would ensure that slashbuster treated materials are not inadvertently placed on private land and would also further reduce short term fire risk by immediately treating (burning) down materials adjacent to private property. Trees cut would be 12" dbh or less. Trees <12" dbh may be left standing in order to achieve spacing between leave trees of 14-30'.

c. Interior Treatment Area

The slashbuster would be used throughout interior portions of the project area (approximately 65 acres) except where noted below:

- within 50' of stream channels (Riparian Reserve "no treatment" zone) except to cross channels at designated locations.
- where slopes exceed 40%.
- in excluded areas designated in the Project Design Features (habitat "islands", snags, large trees, historical site, etc. For more information, see the section "Project Design Features").

1) Woodlands

Cut Douglas-fir smaller than 12" dbh from interior woodlands, except in areas without pine or cedar greater than 12" dbh. Remove shrubs (manzanita and ceanothus) from these stands.

Cut suppressed hardwoods smaller than 12" dbh and that have crown ratios of 20% or less.

A small patch of knobcone pine would not be treated; it would develop through natural disturbance.

Leave 16-35 trees/acre that have live crown ratios of 30% or more. Priority species are oak, madrone, pine and cedar followed by Douglas-fir. Leave some cedar and oak seedlings and saplings.

Remove suppressed and intermediate crown class sprouting tree species <12" dbh to stimulate sprouting.

Leave tall, old manzanita that produce large berry crops (no more than 6/acre). Lower ladder fuel branches may be pruned as necessary. Retain shrub clumps up to 10' in diameter, spaced 25-35' apart.

Trees <12" dbh may be left standing in order to achieve spacing between leave trees of 14-30'.

Pre-existing coarse wood >12" diameter would be protected from shredding or damage to the extent possible. All snags >12" dbh would be protected. If these snags present safety hazards, rather than felling the snags, refrain from working within one tree height of those areas in order to retain the snags. In the event of prescribed burning, the two large relict snags in the project area that are greater than 20" dbh would be protected from fire by pulling back vegetation from their bases and building fire line around them.

Leave 15-20% of each treatment area untreated in the form of ¼ acre or larger areas that are well distributed throughout the project area and are at least 100' apart.

Use underburning to reduce slash where depth is greater than 6" over a one acre area (200' x 200') to reduce the risk of high intensity fire that could damage the soil and seedbed and hamper herbaceous species' reestablishment.

2) Brush Fields

In continuous brush fields, at least two "islands" per acre of brush would be left untreated. Islands are approximately 25x25' to 35x35' in size and are spaced approximately 20-45' apart. Moist micro-sites such as on northerly aspects or in land form depressions should also remain untreated. These moist sites historically would have had less frequent fire compared to surrounding areas and would likely have contain larger, more mature shrubs. In the event of prescribed burning, acceptable loss of these islands would be no more than 20%.

Use broadcast / underburning to reduce slash where depth is greater than 6" over a one acre area (200x200') to reduce the risk of high intensity fire that could damage the soil and seedbed and hamper herbaceous species' reestablishment.

3) Meadow

Restore the meadow by cutting encroaching conifers and brush within the meadow and to the historic meadow's edge. Broadcast burn to reduce heavy grass thatch buildup and retard woody species encroachment. Before burning, hand line would be placed around the meadow.

4) Riparian Reserves

See Table 1. Riparian Reserve Treatment Restrictions in the section "Project Design Features".

d. Follow-up Treatment

One to two years following slashbuster treatment, broadcast or understory burning may be used on the interior (65 acre) portion of the project area to further reduce fuel loadings where slash is greater than 6" deep and continuously covers more than one acre. For more details on burning techniques and parameters, see the section "Project Design Features". Before any follow-up treatment is implemented, interdisciplinary team review of the project site would determine follow-up treatment needs and methods.

It is anticipated that within 5 years following project implementation, vegetation removal and/or low intensity broadcast or underburning may be needed to maintain reduced fire hazard and fuel model objectives throughout the project area.

4. Project Design Features

a. Fuel Hazard Reduction - Burning

A prescribed fire plan would address burning objectives and operational issues. The plan would include acceptable fuel moisture and weather parameters. Burning would be conducted under weather conditions that would help achieve burn objectives, including safety and controllability. Availability of adequate fire suppression resources would also be considered before burning. Prescribed fire plans include design features to reduce potential fire escape from control lines and include: weather and fuel moisture conditions that promote fire behavior that can be readily controlled by direct attack; numbers of people and equipment required as holding forces; and escape contingency requirements such as the availability of local and regional backup forces.

Prescribed burning would comply with the Oregon Department of Forestry's Smoke Management Program and the Department of Environmental Quality's Air Quality and Visibility Protection Program. Additional measures to reduce smoke emissions would include: mopping up as soon as practical after the fire; burning with lower fuel moisture in the smaller fuels to facilitate quick and complete

combustion; burning with higher fuel moisture in the larger fuels to minimize consumption and burn out time; and covering hand piles to permit burning during the rainy season where there is a stronger possibility of atmospheric mixing and smoke dispersal.

Fire lines construction and fire ignition would be performed manually. Fire lines would be constructed around burn units and other features designated for protection (large snags, etc.) Patrol and mop-up would help prevent reburn and fire escape. A helicopter with water bucket may be used during mop-up to help extinguish larger burning fuels and prevent reburn in islands of unburned fuels.

b. Slashbuster Use

Slashbusters would not operate on or traverse rock outcrops, cobble areas, mine tailings or talus areas. Additionally, the deposition of shredded material in these areas would be avoided to the extent possible.

Slashbuster use would be restricted to slopes less than 40%.

Low ground pressure (<4 psi) machinery with semi-grouser tracks would be used. The shredding head would be mounted on an articulated boom at least 30' long.

The slashbuster would only be used when soil moisture content is less than 20% at the 6" depth on non-serpentine soils and 20% at the 8-12" depth on serpentine soils.

To prevent off road vehicle abuse, slashbuster tracks would be blocked with slash at the point of entry into the project area.

Slashbusters would operate on a surface consisting primarily of shredded vegetation; no more than 20% of the tracked surface would be bare soil.

Crossing channels or draws with vehicles or equipment would be limited to designated crossings; vehicles would not travel up or down draws. Crossings would not require any cutting, leveling, or disturbance of banks.

c. Wildlife

Nesting migratory bird disturbance would be avoided or minimized by refraining from project activities, when and where feasible, between April 15 and July 15.

If goshawks or other raptors are determined to be nesting within the project area, seasonal restrictions (reproductive seasons vary by species) for project activities would minimize potential impacts to reproductive success.

d. Fisheries, Hydrology and Soils

If areas that are unstable or exhibit active soil movement (such as slip plains, step benches, recent debris flows or debris slides) are found, no vegetative treatment would occur. Known sites of unstable or potentially unstable areas are managed as Riparian Reserves and would be flagged as avoidance areas.

Table 1 shows width and treatment restrictions in no-treatment zones, which are based on stream type.

Table 1. Riparian Reserve Treatment Restrictions		
Stream Description	Applicable Treatments	No Treatment Zones Within Riparian Reserves
Intermittent non-fish bearing streams *	Slashbusting and selective slashing	No treatment within 50' of the stream channel.
All other streams and springs	Slashbusting and selective slashing	No slashbuster use within 50' of the stream channel. Slashbuster treads would be kept 75' from the channel. Selective slashing would be permitted.
	Broadcast / underburning	No direct ignition within 50' of the stream channel; strive to maintain existing fuel profiles and vegetation densities here.
	Hand piling / burning	No hand piling or pile burning within 50' of the stream channel.
<i>*Intermittent non-fish bearing streams were formerly known as class 4</i>		

e. Botany (including special status species and noxious weeds)

Noxious weeds would be treated according to the Integrated Weed Management Plan and Environmental Assessment OR-110-98-14 using primarily mechanical methods.

Vehicle movement would be limited to the dry season to prevent weed seed transport through mud.

Mechanical equipment would be power sprayed and washed before entering the units.

Native grasses and/or sterile wheatgrass would be seeded on disturbed soils in areas at risk for erosion (e.g., main entry points, burn pile scars, etc.).

f. Cultural Resources

All known cultural sites have been flagged and would be avoided.

No treatments would occur within the cultural resource site buffer.

Directionally fall timber away from cultural resource sites.

Do not hand pile or burn within 20' of cultural resource site buffers.

Chapter 3. Environmental Consequences

A. Introduction

Only substantive site-specific environmental changes that would result from implementing the proposed action or alternatives are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to that component and found the proposed action or alternatives would have minimal or no effects. Similarly, unless addressed specifically, the following were found to be unaffected by the proposed action or alternatives: air quality; areas of critical environmental concern (ACEC); cultural or historical resources; Native American religious sites; prime or unique farmlands; floodplains; endangered, threatened or sensitive plant, animal or fish species; water quality; wetlands/riparian zones; wild and scenic rivers; and wilderness areas. In addition, hazardous waste or materials are not directly involved in the proposed action or alternatives.

B. Site-Specific Beneficial or Adverse Effects of the Alternatives

1. Fire and Fuels

a. Affected Environment

Approximately 50% of the area is characterized by continuous brush fields at least 6' high (fuel model 4). The other half of the project area is primarily a conifer-hardwood mix (fuel model 9). High fuel densities in the project area could contribute to active crown fires and significant tree mortality given high to extreme fire weather conditions.

b. Environmental Effects

1) Alternative 1: No Action

Fire hazard and hazardous fuel conditions would continue to increase over time as live fuel density increases due to brush, hardwood and conifer growth. Increased fire intensity, flame length and rate of spread would result from increased fuel levels. Crown bulk densities would also increase, thus increasing the potential for stand replacement fire given high to extreme fire weather conditions.

2) Alternative 2: Proposed Action

Fuel reduction treatments would convert approximately 80% (by area) of the vertical live fuel profile to a horizontal surface fuel, thus reducing crown bulk density and crown fire risk. Crown base height and dead and down fuel loading would increase. These fuel loadings would vary based on stand age, spacing, fuel diameters, and further treatment to remove these activity fuels, such as burning or hauling.

Slashbuster treatments would reduce the vertical live fuel profile to a compact fuel bed, generally less than 8" deep. Fire intensities, flame lengths and rates of spread would decrease under these

prescriptions. Fire suppression forces would have more time to detect and respond to a slower moving fire and would have a greater chance of effective direct attack. Fire behavior would be reduced to a low intensity ground fire and mortality to existing trees would be minimized. Field observations indicate that slashbuster treated material decomposes more quickly than manually treated fuels.

Five to 10 years following treatment, fire hazard typically increases more rapidly in shrub lands than in forested areas as brush species resprout, often necessitating earlier maintenance in those areas.

2. Wildlife

a. Affected Environment

Three plant associations are represented in the project area: Douglas-fir-Ponderosa Pine/Poison Oak, Douglas-fir/Dry Shrub, and White Oak-Douglas-fir/Poison Oak.

The project area provides potential habitat for a number of special status species including the goshawk (*Accipiter gentilis*), other raptors, and five Survey and Manage bat species. The area also provides potential habitat for migratory birds such as Lewis's woodpecker, rufous hummingbirds and the flammulated owl. As of this date, surveys have not been completed for special status species that might be affected by the proposed action.

The following discussion of potential impacts on these species is based on alteration of potential habitat which will be assumed to be occupied. It is improbable that all areas considered as potential habitat would prove to be occupied; therefore, the actual effects would be equal to or less than those identified. The entire project area is surrounded by existing roads, developments and residences. Consequently, this nearby activity and recreation present a baseline level of disturbance.

Habitat is diverse and includes a mosaic of white oak woodland and hardwood stands dominated by madrone and a few large diameter ponderosa pines. A small thicket of knobcone pine is on a knoll at the southern end of the project area. The primary tree species in the project area are ponderosa pine, sugar pine, Douglas-fir, madrone, white oak and manzanita.

In general, conifers are in the mature age class and there is a conspicuous absence of relict trees. There are very few large diameter snags. Coarse wood is distributed throughout the area.

The most common hardwoods in the project area are madrone and white oak. These madrone and oak stands are characterized by relatively open canopies. Dense thickets of decadent manzanita taller than four feet occur in portions of the project area.

The project area provides potential foraging habitat for goshawks. Furthermore, bats could utilize green trees and snags as roosts. Typically, foraging bats are strongly associated with bodies of water. Although the project area does not have year round pools of water available, it is still considered suitable foraging habitat.

The project area is not considered suitable northern spotted owl (*Strix occidentalis caurina*), great grey owl (*Strix nebulosa*), or red tree vole (RTV) (*Arborimus longicaudus*) habitat.

In general, none of the project area meets the definition of suitable RTV habitat as described in the species' survey protocol (version 2.1). While 14-16" dbh Douglas-fir trees are present, there are inadequate numbers of large predominant conifers to meet minimum RTV protocol requirements.

Tree species composition, small average tree diameter, and the absence of relict trees do not provide suitable nesting habitat for great grey owls or northern spotted owls. Additionally, adjacent openings include lawns and pastures which provide less favorable great grey owl foraging conditions than natural openings.

The project area provides potential suitable nesting habitat for Lewis's woodpecker and the flammulated owl; however, based on the lack of mature conifers and large snags, this habitat is considered marginal. The project area provides potential suitable nesting habitat for the rufous hummingbird.

b. Environmental Effects

1) Alternative 1: No Action

In the no action alternative, recreational use would continue at current levels. Recreation impacts to wildlife would include nest abandonment, displacement, changes in food habits and altered behavior. Existing vegetation would continue to encroach on meadows, reducing the historical size of these open habitats. Shrubs and small trees would continue to encroach upon mature hardwood forests, competing for resources and causing stress to the larger, dominant trees that are currently providing large structure habitat that is otherwise limited in the project area.

2) Alternative 2: Proposed Action

The primary impacts associated with the proposed fuels reduction are changes in the horizontal and vertical structure of shrubs and small trees resulting in more open canopies and reduced hiding cover. However, habitat islands will be retained. For example, snags will be retained which provide nesting, roosting and foraging habitat for primary and secondary cavity excavators, and species dependent on cavity excavators such as the flammulated owl. Furthermore, untreated woodland and brush islands provide escape, hiding, thermal, foraging and nesting cover for a wide range of species.

Species that benefit from fire suppression and the resultant increase in tree and shrub densities may be impacted by this fuels reduction project. However, many more wildlife species would benefit in the long term as vegetation density is reduced and habitat diversity is improved.

Disturbance due to project implementation activities (thinning, burning, slash busting, etc.) would be of short duration (approximately three weeks) and would occur during the fall, winter or spring. Implementation disturbance could cause temporary displacement and modified behavior of wildlife for

the duration of project activities. Nesting migratory bird disturbance would be avoided or minimized by refraining from project implementation, when and where feasible, between April 15 and July 15.

3. Soils and Water

a. Affected Environment

The project area is located in the Vannoy Creek above Lathrop Creek 7th field watershed of the Lower Rogue-Grants Pass 6th field watershed. The project area elevation range is 900-1,010'. Intermittent streams are located within the project area. Average annual precipitation in the Grants Pass 5th field watershed ranges from approximately 28" on the east end of the watershed to 36" in the west. No streams in the 7th field watershed are listed as Water Quality Limited (303(d)).

Holland-Barron-Siskiyou and Siskiyou-Tethrick are project area soil types and are derived primarily from granitic parent materials. The Holland-Barron-Siskiyou soil is typically deep, fine textured, poorly drained and is susceptible to stream bank erosion. The Siskiyou-Tethrick soil has low cohesion and tends to erode easily when subject to concentrated flow. Siskiyou soils usually have thin surface duff layers that help protect the mineral soil; however, because the duff and litter layer is usually less than an inch deep, these soils are vulnerable to concentrated flow erosion. Furthermore, the top soil is thin and can be easily lost, resulting in minimal soil fertility with a poor ability to support vegetation regrowth.

b. Environmental Effects

1) Alternative 1: No Action

Current management and vegetation trends would result in no impacts to soils over the short or long term. However, a wildfire, especially one of high intensity or that occurs adjacent to streams, could adversely impact soils and water including:

- Increased erosion and sedimentation. Re vegetation would occur slowly. Within ten years, sediment and erosion should return to pre-fire levels.
- Reduced soil productivity due to loss of the nutrient rich duff/litter layer and reduced soil organic matter.
- Soil compaction due to road development and heavy equipment use for suppression activities.
- Increased stream temperatures, peak flows and water yield due to reduced vegetative cover.

2) Alternative 2: Proposed Action

Table 2 summarizes the short and long term effects of the proposed action.

Table 2. Soil Impact Summary Ratings			
Term	Effect	Alt. 1 (No Action)	Alt. 2 (Proposed Action)
Short term (1-5 yrs)	Disturbance / Erosion	No change	Slight increase
	Compaction		
	Productivity		
Long term (5-20 yrs)	Disturbance / Erosion	No change (assumes a moderate to high fire hazard and risk) Slight increase (assumes occurrence of a moderate to high intensity fire)	No change

Overall, adverse effects at the 7th field watershed level would be minimal and of short duration. It is anticipated that only 5% or less of the entire area would show signs of soil compaction as a result of slashbuster use. A short term, minimal reduction of vegetative cover may result from the proposed actions which could lead to a short term, minimal increase in water yield. In the event of a wildfire following fuel hazard reduction treatment, fire intensity would be less than without treatment. No short or long term increase in stream temperature is anticipated. No long term adverse effects are expected as a result of the proposed actions.

Cumulative hydrologic effects at the 7th field level would be negligible. Estimated compaction of this 7th field watershed is low to moderate and minimal additional compaction is expected. Additionally, solar exposure to stream surfaces would not increase. Therefore, erosion, stream sediment, stream flow characteristics, and summer stream temperatures are unlikely to change.

4. Botany

a. Affected Environment

The project area contains a mixture of dense shrubs (predominantly buckbrush and manzanita), scattered small meadow openings and mixed evergreen woodlands. No federally listed endangered, threatened or bureau special status plant species (vascular, lichens or bryophytes) were found in the project area. A few small patches (< 10 m²) of scotch broom (*Cytisus scoparius*) occur in the project area.

b. Environmental Effects

1) Alternative 1: No Action

The current condition of hazardous fuels and increased potential for severe wildfire would increase over time. Competing vegetation would continue to encroach upon meadow openings and oak woodlands,

resulting in loss or reduced size of these habitat types. The current dense vegetation and competition may hinder the spread of scotch broom. However, a moderate to severe fire could result in proliferation of this weedy shrub into newly created openings.

2) Alternative 2: Proposed Action

Tree and shrub cover would be reduced, which would release understory herbaceous and other ground cover species. Vegetation effects resulting from slashbuster use were reviewed in several slashbuster units in the Ashland Resource Area and include the following general observations:

- Where hardwood (oaks and madrones) canopies were maintained at higher levels (approximately 30-40%) and shrubs were removed 30' around hardwoods, understories were more vigorous and included native grasses.
- Native grasses seemed more common under hardwood canopies.
- Following recent, dense brush removal, canopy was greatly reduced, bare soil was common, (especially on slopes) and slashbuster tracks were visible from a distance. The herbaceous layer was largely absent, but was probably minimal before treatment due to dense overstory shrubs. No mitigations for soil erosion existed.
- Germination of understory species seemed impeded where slash depth exceeded six inches.
- Treated madrones exhibited vigorous resprouting, resulting in the need for frequent maintenance (brushing) to maintain fuel reduction objectives. Manzanita and buckbrush regenerated primarily from seed, as opposed to resprouting.
- Vegetation mosaics mimicked the pattern of the natural fire regime and showed greater potential for the development of healthy, diverse habitats than did areas where the canopy was reduced consistently across the landscape and cover remained in draws only.
- Hand piling and burning following slashbuster use facilitated re-establishment of the herbaceous layer and reduced the immediate potential for severe wildfire through the removal of the 6-12" slash layer typically associated with slashbuster use. However, even without hand piling and burning, slashbusters facilitated fire suppression access, reducing the risk of wildfire spread. The risk associated with a slash layer decreased over time as the slash decomposes and compresses.
- Broadcast burning slash better replicated natural, low intensity burns on the landscape as long as the slash layer was not too thick. A slash layer deeper than 6" may create high intensity fire that could damage the soil and seedbed and hamper herbaceous species' reestablishment. The added PDF to reduce slash where depth is greater than 6" over a one acre area (200' x 200'), would reduce the potential for this effect to occur.

As the use of slashbusters increase across the landscape, the risk of reduced habitat diversity and the

spread of noxious weeds increase. However, slashbusters can also assist in the retention of habitat diversity by reducing the risk of catastrophic wildfire. The loss of habitat diversity can be mitigated by treating the landscape in a mosaic pattern, retaining canopy cover in moist microsites and native seed beds. Noxious weed introduction and spread would be monitored and treated according to the Medford District's Integrated Weed Management Plan (1998).

5. Cultural Resources

a. Affected Environment

A cultural resource survey of the project area was performed on November 20, 2002, January 6, 2003 and March 6, 2003. The small size and gentle topography of the project area allowed for 100% coverage of the 80 acres. During the survey, one historic site and one prehistoric isolate were recorded.

b. Environmental Effects

1) Alternative 1: No Action

There would be no effect to the historic site given current levels of use and recreation in the area.

2) Alternative 2: Proposed Action

Proposed fuel treatment activities would occur near the cultural resource site. However, the site would be buffered and no activities would occur within the buffered area. Therefore, no impacts due to project implementation are expected.

6. Visual Resources

a. Affected Environment

The project area is in a Class 3 Visual Resource Management (VRM) Area.

b. Environmental Effects

1) Alternative 1: No Action

There would be no effect to visual resources.

2) Alternative 2: Proposed Action

The project would meet VRM Class 3 objectives which are to: "partially retain the existing character of the landscape. Management activities may attract but should not dominate the view of the casual observer." (BLM Manual H8410-1, 1986.)

Chapter 4. Agencies and Persons Consulted

A. Public Involvement

In addition to public scoping, adjacent landowners were contacted to discuss the project. Furthermore, extensive discussions about the Resource Area's prescribed burning program have been held with Oregon State Department of Forestry.

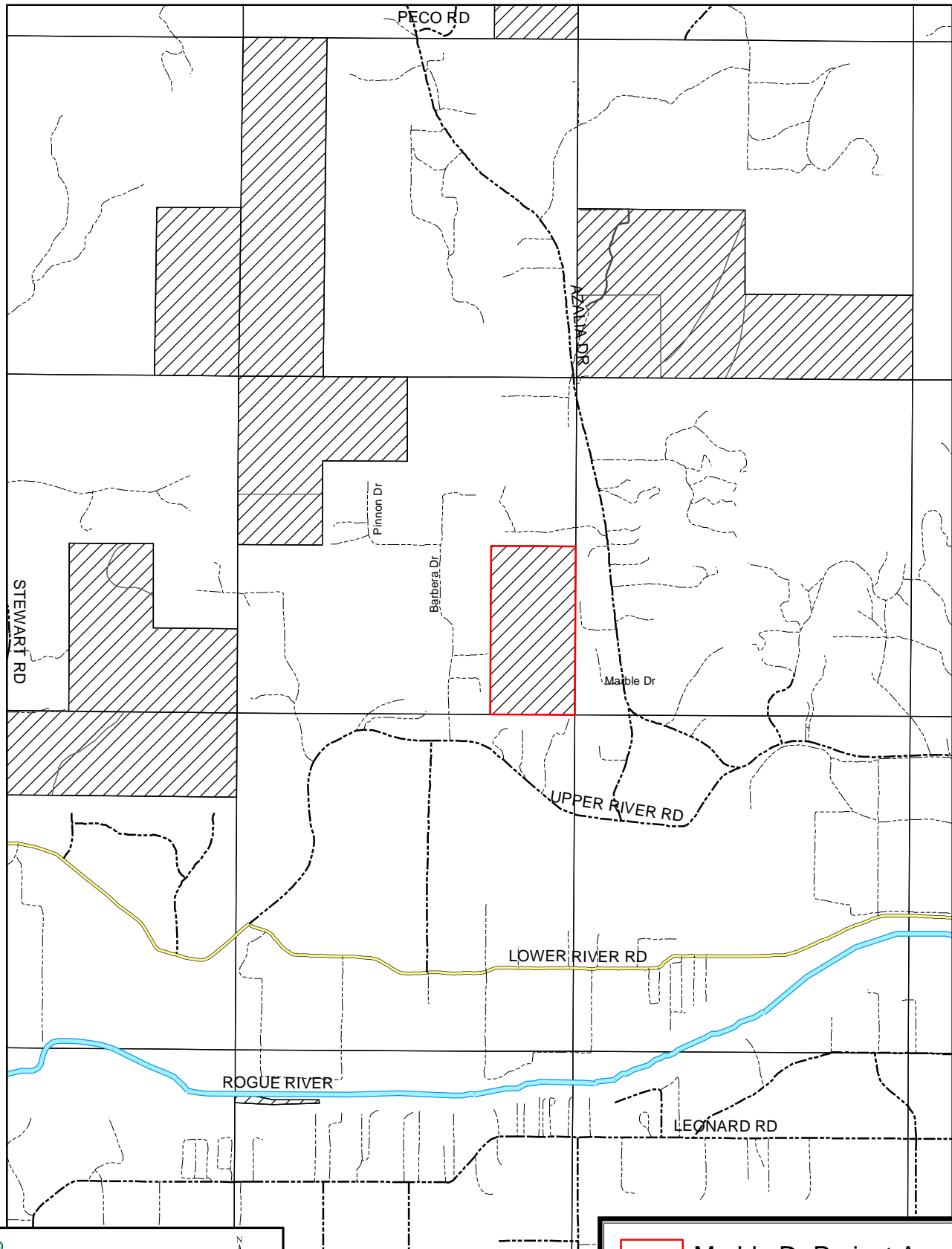
B. Availability of Document and Comment Procedures

Copies of the EA will be available for public review in the BLM Medford District Office. A formal 15 day public comment period will be held following an announcement in the Grants Pass Daily Courier.

Written comments should be addressed to Abbie Jossie, Field Manager, Grants Pass Resource Area, at 3040 Biddle Road, Medford, OR 97504. E-mailed comments may be sent to or110mb@or.blm.gov.

Marble Drive Urban Interface Fuels Reduction Vicinity Map

T35S
T36S



United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, Oregon 97504-4180



R6W



Marble Dr Project Area

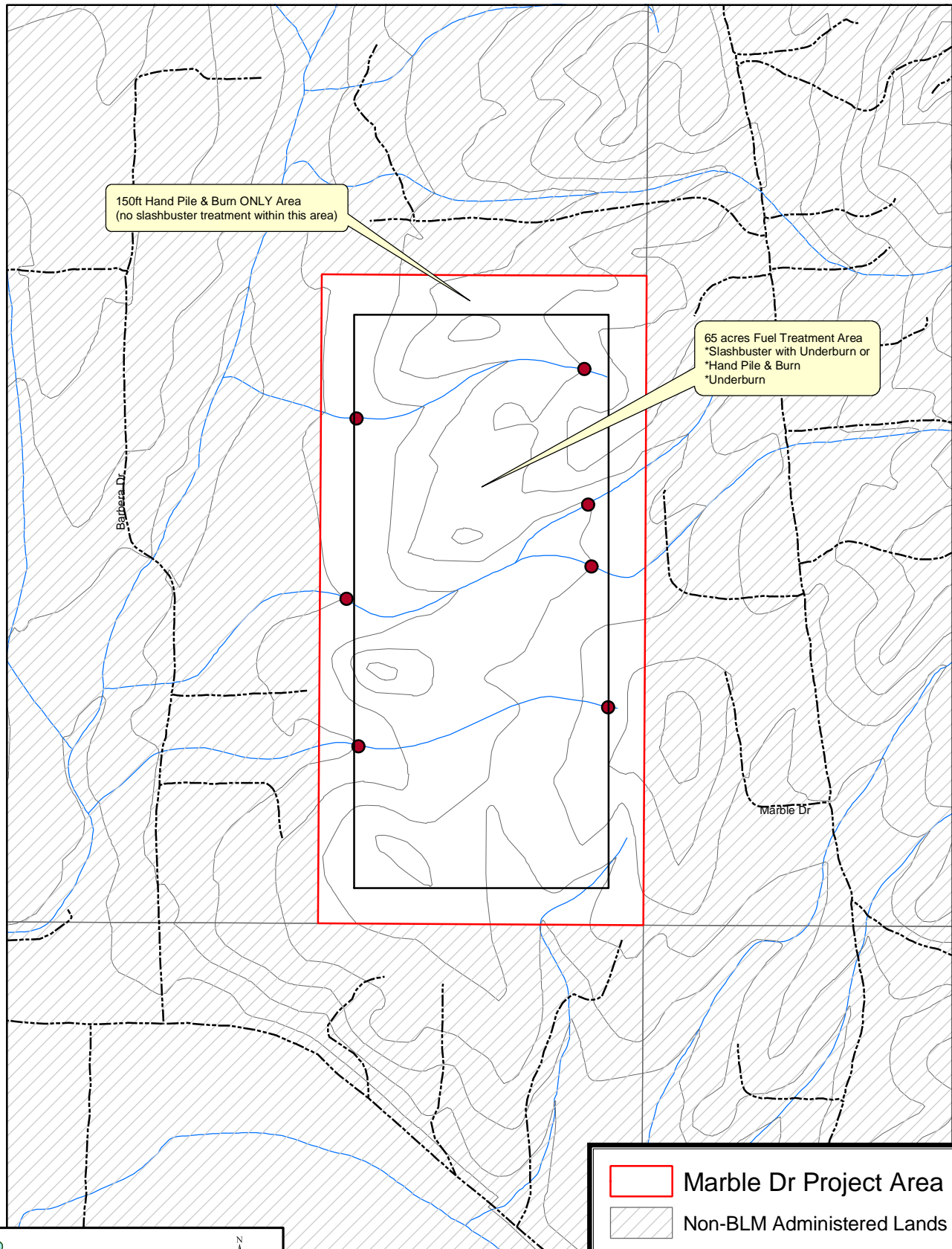
BLM Administered Lands

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May 2003

Marble Drive Urban Interface Fuels Reduction Treatment Map



- Marble Dr Project Area
- Non-BLM Administered Lands
- Crossing Points for the Slashbuster
- Contour Interval 20 ft
- Streams



United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, Oregon 97504-4180



R6W

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Appendix B. Alternatives Considered But Not Analyzed

Burning Only

Fuel hazard reduction objectives would likely be unmet if burning (during periods when the risk of fire escape and danger to fire fighters is minimal) were the only fuel hazard reduction treatment used. Furthermore, extensive burning in the project area would not comply with the Oregon Smoke Management Plan (Operational Guidance for the Oregon Smoke Management Program. Directive 1-4-1-601, P.N. 845, October, 1992).

Public Fuel Wood and/or Pole Gathering Opportunities

Fire wood or poles that may become available as a result of project implementation would not be easily accessed by the public due to the fact that the project area is completely encompassed by private land.

Appendix C. Tools

Understory Burning. Underburning is low intensity prescribed fire over a majority of the burn area. In order to achieve a desired mosaic effect, burn intensity may be greater in areas with heavier fuels. Underburning reduces ground litter, down woody material and ladder fuels. It also stimulates growth of some plant species. Underburning would be conducted at any time throughout the year when fuel and weather conditions ensure safe and successful operations. Typically, burning occurs in the fall through late spring. Summer or early fall burning is less common, but may be used as conditions permit.

Broadcast burning. Broadcast burning is similar to underburning but with an absence of an overstory; burning typically occurs in brush, grasslands or open stands of timber.

Slashbusting. The slashbuster® is a large excavator equipped with a 30' (or longer) boom and a hydraulic chipping/shredding head that is used to reduce fuel loading and fuel hazard. The machine mechanically shreds slash or live vegetation, immediately and substantially altering the fuel profile. Live vegetation treated by the slashbuster would be 12" dbh or less. Slashbuster treatments can be designed to simulate slashing, selective slashing or understory thinning.

Hand Piling and Burning. This treatment reduces residual slash created by other vegetation treatments such as thinning, brushing and slashing and can be used where underburning is not feasible. Fuels 1-6" in diameter and greater than 2' in length are stacked in piles by hand, covered to maintain a dry ignition point and then burned in the fall or winter after the project area has received more than an inch of precipitation. Hand pile burning is designed to remove approximately 75-90% of constructed hand piles. Burning piles during wet periods reduces the potential for fire spread, the need for aggressive mop-up, and the potential for scorch and mortality to the remaining trees and shrubs.

Selective Slashing. Chainsaws are used to cut small diameter material (living and dead) near ground level, including brush. Live vegetation treated would be <6" dbh and remaining stump heights, <6". Conifer spacing would range from 14'x14' to 30'x30'. The range for hardwoods and shrubs would be 20'x20' to 30'x30'. The number of leave trees and shrubs would be determined by the spacing designated (e.g., 14'x14' spacing equals 220 trees/acre). Criteria for leave vegetation may include size, vigor, form, number of stems in multi-stem hardwoods, and species. The resulting down material may be piled and burned or lopped (cut into smaller pieces).